

Application No. 10/532,033
Amdt. dated December 9, 2008
Response to the Office Action of September 10, 2008

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Canceled)
2. (Currently Amended) ~~Medicament according to~~ The method of claim ~~1~~, characterized in that 16 wherein:

R¹ is selected from the group consisting of hydrogen, an substituted or unsubstituted alkyl, an substituted or unsubstituted alkenyl, and or an substituted or unsubstituted alkynyl, it being possible for each of these groups to be wherein when R¹ is substituted alkyl, substituted alkenyl, or substituted alkynyl, the substituent(s) thereof is (are) selected from the group consisting of with an alkoxy, [[a]] haloalkoxy, [[an]] alkylthiol, [[a]] halogen, or a unsubstituted phenyl, and phenyl unsubstituted or substituted with an a moiety selected from the group consisting of alkyl, with a haloalkyl, with an alkoxy, with a haloalkoxy, with an alkylthiol, and or with a halogen, or hydrogen;

R² and R³ which may be identical or different and which have the same definition as that given above for are independently selected from the group consisting of R¹, or which correspond to an alkoxy, an alkoxyalkyl, a benzyloxy, a cyano, and or an alkylcarbonyl;

R⁴ is an selected from the group consisting of:

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(a) substituted or unsubstituted alkyl, an substituted or unsubstituted alkenyl, and
~~or an substituted or unsubstituted alkynyl, it being possible for each of these groups to be~~
wherein when R⁴ is substituted alkyl, substituted alkenyl, or substituted alkynyl, the
substituent(s) thereof is (are) selected from the group consisting of ~~with~~ an alkoxy, [[a]]
haloalkoxy, [[an]] alkylthiol, a halogen, unsubstituted or a phenyl, and phenyl unsubstituted or
substituted with an a moiety selected from the group consisting of alkyl, ~~with a haloalkyl, with an~~
~~alkoxy, with a haloalkoxy, with an alkylthiol, and or with a halogen;~~

(b) a hydroxyl;

(c) a halogen;

(d) a cyano;

(e) an acyl, an amine, [[a]] monoalkylamine, a dialkylamine, unsubstituted or a
phenyl, and phenyl unsubstituted or substituted with a moiety selected from the group consisting
of an alkyl, with a haloalkyl, with an alkoxy, with a haloalkoxy, or with an and alkylthiol;

m = 0 or 1;

when it is present, R⁵ is a group having the same definition as that given above for R⁴,

A is a direct bond, -O-, -S-, -NR⁹-, -CHR⁷- or -O-CHR⁷-,

~~with each~~ R⁹, when it is any are present, corresponding to an is selected from the group
consisting of hydrogen, substituted or unsubstituted alkyl, an substituted or unsubstituted alkenyl,
and substituted or unsubstituted or an alkynyl, it being possible for each of these groups to be
wherein when an R⁹ is a substituted alkyl, a substituted alkenyl, or a substituted alkynyl, the

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substituent(s) thereof is (are) selected from the group consisting of ~~with an~~ alkoxy, [[a]] haloalkoxy, ~~an~~ alkylthiol, [[a]] halogen, unsubstituted or a phenyl, and phenyl ~~unsubstituted or~~ substituted with ~~an~~ a moiety selected from the group consisting of alkyl, ~~with a~~ haloalkyl, ~~with an~~ alkoxy, ~~with a~~ haloalkoxy, ~~with an~~ alkylthiol, and ~~or with a~~ halogen, ~~or corresponds to~~ hydrogen; and R⁷ ~~has the same definition as that given above for~~ is selected from the group consisting of R⁹; ~~or represents a~~ hydroxyl; [[a]] halogen; [[a]] cyano; [[an]] acyl; alkoxy; [[a]] haloalkoxy; and ~~or an~~ alkylthiol;

A is linked to the 4-position of the benzene ring M; and

R⁶ is a substituted or unsubstituted phenyl or an aromatic heterocycle, ~~unsubstituted or~~ substituted with ~~one or more~~ substituents, which may be identical or different, and which may be which when R⁶ is a substituted phenyl or substituted aromatic heterocycle, the substituent(s) thereof is (are) selected from the following list: group consisting of

- (a) hydroxyl;
- (b) halogen;
- (c) cyano;
- (d) acyl;
- (e) amine;
- (f) alkylamine;
- (g) dialkylamine;
- (h) alkyl[[,]];

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(i) haloalkyl[[],];

(j) R^aO-alkyl[[],];

(k) acyloxyalkyl[[],];

(l) cyanooxyalkyl[[],];

(m) alkoxy;

(n) haloalkoxy;

(o) alkylthiol;

(p) cycloalkyl unsubstituted or substituted with ~~an~~ a moiety selected from the group consisting of alkyl, [[a]] haloalkyl, an alkoxy, [[a]] haloalkoxy, and ~~or with an alkylthiol;~~
and

(q) benzyl unsubstituted or substituted with ~~an~~ a moiety selected from the group consisting of alkyl, [[a]] haloalkyl, an alkoxy, [[a]] haloalkoxy, and ~~or with an alkylthiol.~~

3. (Currently Amended) ~~Medicament according to~~ The method of claim 1, characterized in that 16 wherein:

R¹ = H

~~————R²=C₁-C₆-alkyl preferably ethyl;~~

~~————R³=C₁-C₆-alkyl, preferably methyl;~~

~~————R⁴=C₁-C₆-alkyl, preferably methyl;~~

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~~—R⁵=C₁-C₆ alkyl, preferably methyl wherein R², R³, R⁴, and R⁵ are independently selected~~
from the group consisting of C₁-C₆ alkyl and R⁵ is linked to the carbon at C₅ of the benzyl ring
M, with m=1;

A is linked to the carbon at C₄ of the benzyl ring M and represents -O-; and

~~R⁶=aryl, preferably benzyl, advantageously~~ R⁶ is unsubstituted aryl or aryl substituted
with at least one moiety selected from the group consisting of alkyl and/or with at least one and
halogen.

4. (Currently Amended) ~~Medicament according to The method of claim 3; characterized in~~
~~that wherein~~ compound (I) is selected from the group consisting of
N-ethyl-N-methyl-N'-[4-(4-
chloro-3-trifluoromethylphenoxy)-2,5-dimethylphenyl]imidoformamide,
~~and/or~~ N-ethyl-N-methyl-N'-[4-(4-
fluoro-3-trifluoromethylphenoxy)-2,5-dimethylphenyl]imidoformamide,
~~and/or~~ N-ethyl-N-methyl-N'-[4-(4-
cyano-3-trifluoromethylphenoxy)-2,5-dimethylphenyl]imidoformamide,
and the possible tautomers and salts, ~~in particular addition salts with an acid or a base, which that~~
are pharmaceutically acceptable of these compounds (I).

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5. (Currently Amended) ~~Medicament according to~~ The method of claim 1, ~~characterized in that it additionally comprises~~ 16 wherein the medicament further comprises at least one other antifungal compound (II).

6. (Currently Amended) ~~Medicament according to~~ The method of claim 5, ~~characterized in that wherein~~ the antifungal compound (II) is ~~chosen from the following antifungal families:~~
selected from the group consisting of azoles, such as bifonazole, butoconazole, clotrimazole, eberconazole, econazole, fenticonazole, fluconazole, itraconazole, ketoconazole, miconazole, oxiconazole, posaconazole, sulconazole, terconazole, tioconazole, voriconazole, zinoconazole; polyenes, such as amphotericin B, nystatin; allylamines and benzylamines, such as butenafine, naftifine, terbinafine; thiocarbamates, such as tolnaftate; candins, such as caspofungin, cilofungin; nucleoside analogues, such as flucytosine; sordarins; polyoxines and nikkomycins, such as nikkomycins Z, J, pseudo J, PX, RZ, pseudo Z; pradimicins, such as pradimicin A; benanomycins; aureobasidins; UK-2A or UK-3A; and cationic peptides; taken alone or as a mixture, and their possible tautomers and salts, ~~in particular addition salts with an acid or a base,~~ and their lipid or liposomal formulations, ~~which~~ that are pharmaceutically acceptable.

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7. (Currently Amended) ~~Antifungal~~ The method ~~medicament according to of~~ claim 4; characterized in that 5 wherein the mass ratio (I/II) is defined as follows: $0.02 \leq I/II \leq 50$ preferably $0.1 \leq I/II \leq 20$ and still more preferably $0.5 \leq I/II \leq 10$.

8. (Currently Amended) ~~Antifungal~~ The method ~~medicament according to of~~ claim 4; characterized in that 5 wherein the compound (I)/compound (II) ratio is chosen so as to produce a synergistic effect.

9. (Currently Amended) ~~Antifungal~~ The method ~~medicament according to of~~ claim 8; characterized in that wherein the compound (I)/compound (II) ratio is between 0.5 and 10.

10. (Currently Amended) ~~Antifungal~~ The method ~~medicament according to of~~ claim 1; characterized in that it additionally comprises 16 wherein the medicament further comprises at least one pharmaceutically acceptable excipient.

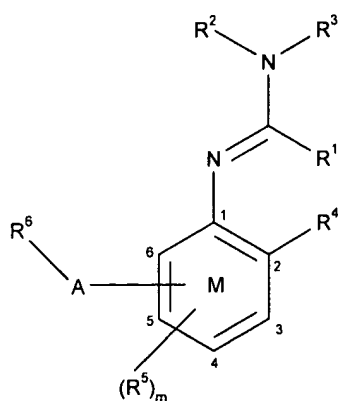
11. (Currently Amended) ~~Antifungal~~ The method ~~medicament according to of~~ claim 1; characterized in that it comprises 5 wherein the medicament comprises from 0.5 to 99% of the combination of compound (I) and compound (II).

12 - 13 (Canceled)

14. (Currently Amended) ~~Use of an antifungal medicament according to~~ The method of
claim 1, 16 wherein the infection is an ~~for the treatment of~~ *Candida albicans* ~~infections~~ infection.

15. (Currently Amended) ~~Use of an antifungal medicament according to~~ The method of
claim 1, 16 wherein the infection is an ~~for the treatment of~~ *Aspergillus fumigatus* ~~infections~~
infection.

16. (New) A method for treating *Candida albicans* or *Aspergillus fumigatus* infections in
humans or animals comprising administering to a patient in need of such treatment a
pharmaceutically effective dose of an antifungal medicament comprising at least one compound
of formula (I):



(I)

wherein:

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R¹ is selected from the group consisting of hydrogen, substituted or unsubstituted alkyl, substituted or unsubstituted alkenyl, substituted or unsubstituted alkynyl, and a substituted or unsubstituted carbocyclic or heterocyclic monovalent group;

R² and R³ are independently selected from the group consisting of R¹; a cyano; an acyl; -OR^a or -SR^a, wherein R^a is selected from the group consisting of a substituted or unsubstituted alkyl, a substituted or unsubstituted alkenyl, a substituted or unsubstituted alkynyl, and a substituted or unsubstituted carbocyclic or heterocyclic monovalent group, or R² and R³, or R² and R¹ may form together and with the atoms linking them, a substituted or unsubstituted ring;

R⁴ is selected from the group consisting of a substituted or unsubstituted alkyl, a substituted or unsubstituted alkenyl, a substituted or unsubstituted alkynyl, a substituted or unsubstituted carbocyclic or heterocyclic monovalent group, hydroxyl, mercapto, azido, nitro, halo, cyano, unsubstituted or substituted acyl, amino, cyanato, thiocyanato, -SF₅, -OR^a, -SR^a, and -Si(R^a)₃;

m = 0, 1, 2 or 3;

the optional R⁵ group or the optional R⁵ groups, which may be mutually identical or different, have the same definition as that given above for R⁴;

R⁶ is an unsubstituted or substituted carbocyclic or heterocyclic group; and

A is selected from the group consisting of a direct bond, -O-, -S(O)-, -NR⁹-, -CR⁷=CR⁷-, -C≡C-, -A¹-, -A¹-A¹-, -O-(A¹)_k-O-, -O-(A¹)_k-, -A³-, -A⁴-, -A¹O-, -A¹S(O)-, -A²-, OA²-, -NR⁹A²-,

$-\text{OA}^2-\text{A}^1-$, $-\text{OA}^2-\text{C}(\text{R}^7)=\text{C}(\text{R}^8)-$, $-\text{S}(\text{O})_n\text{A}^1-$, $-\text{A}^1-\text{A}^4-$, $-\text{A}^1-\text{A}^4-\text{C}(\text{R}^8)=\text{N}-\text{N}=\text{CR}^8-$,
 $-\text{A}^1-\text{A}^4-\text{C}(\text{R}^8)=\text{N}-\text{X}^2-\text{X}^3-$, $-\text{A}^1-\text{A}^4-\text{A}^3-$, $-\text{A}^1-\text{A}^4-\text{N}(\text{R}^9)-$, $-\text{A}^1-\text{A}^4-\text{X}-\text{CH}_2-$, $-\text{A}^1-\text{A}^4-\text{A}^1-$, $-\text{A}^1-\text{A}^4-\text{CH}_2\text{X}-$,
 $-\text{A}^1-\text{A}^4-\text{C}(\text{R}^8)=\text{N}-\text{X}^2-\text{X}^3-\text{X}^1-$, $-\text{A}^1-\text{X}-\text{C}(\text{R}^8)-$, $-\text{A}^1-\text{X}-\text{C}(\text{R}^8)=\text{N}-\text{N}=\text{CR}^8-$, $-\text{A}^1-\text{X}-\text{C}(\text{R}^8)=\text{N}-\text{N}(\text{R}^9)-$,
 $-\text{A}^1-\text{X}-\text{A}-\text{X}^1-$, $-\text{A}^1-\text{O}-\text{A}^3-$, $-\text{A}^1-\text{O}-\text{C}(\text{R}^7)=\text{C}(\text{R}^8)-$, $-\text{A}^1-\text{O}-\text{N}(\text{R}^9)-\text{A}^2-(\text{R}^9)-$, $-\text{A}^1-\text{O}-\text{N}(\text{R}^9)-\text{A}^2-$,
 $-\text{A}^1-\text{N}(\text{R}^9)-\text{A}^2-\text{N}(\text{R}^9)-$, $-\text{A}^1-\text{N}(\text{R}^9)-\text{A}^2-$, $-\text{A}^1-\text{N}(\text{R}^9)-\text{N}=\text{C}(\text{R}^8)-$, $-\text{A}^3-\text{A}^1-$, $-\text{A}^4-\text{A}^3-$, $-\text{A}^2-\text{NR}^9-$,
 $-\text{A}^1-\text{A}^2-\text{X}^1-$, $-\text{A}^1-\text{A}^1-\text{A}^2-\text{X}^1-$, $-\text{O}-\text{A}^2-\text{N}(\text{R}^9)-\text{A}^2-$, $-\text{CR}^7=\text{CR}^7-\text{A}^2-\text{X}^1-$, $-\text{C}\equiv\text{C}-\text{A}^2-\text{X}^1-$,
 $-\text{N}=\text{C}(\text{R}^8)-\text{A}^2-\text{X}^1-$, $-\text{C}(\text{R}^8)=\text{N}-\text{N}=\text{C}(\text{R}^8)-$, $-\text{C}(\text{R}^8)=\text{N}-\text{N}(\text{R}^9)-$, $-(\text{CH}_2)_2-\text{O}-\text{N}=\text{C}(\text{R}^8)-$ and
 $-\text{X}-\text{A}^2-\text{N}(\text{R}^9)-$

wherein

$n = 0, 1$ or 2 ,

$k = 1$ to 9 ,

$\text{A}^1 = -\text{CHR}^7-$,

$\text{A}^2 = -\text{C}(=\text{X})-$,

$\text{A}^3 = -\text{C}(\text{R}^8)=\text{N}-\text{O}-$,

$\text{A}^4 = -\text{O}-\text{N}=\text{C}(\text{R}^8)-$,

$\text{X} = \text{O}$ or S ,

$\text{X}^1 = \text{O}$, S , NR^9 or a direct bond,

$\text{X}^2 = \text{O}$, NR^9 or a direct bond,

$\text{X}^3 = \text{hydrogen}$, $-\text{C}(=\text{O})-$, $-\text{SO}_2-$ or a direct bond,

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each R⁷ is independently selected from the group consisting of unsubstituted or substituted alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted phenyl, hydrogen, halogen, cyano, and acyl;

each R⁸ is independently selected from the group consisting of alkyl, substituted or unsubstituted alkenyl, substituted or unsubstituted alkynyl, substituted or unsubstituted alkoxy, substituted or unsubstituted alkylthio, a substituted or unsubstituted carbocyclic or heterocyclic monovalent group, and hydrogen;

each R⁹ is independently selected from the group consisting of unsubstituted or substituted alkyl, a substituted or unsubstituted monovalent carbocyclic or heterocyclic group, and acyl; or two R⁹ groups may form together, and with the atoms linking them, a 5-7-membered ring;

the group represented on the right side of the bond A is linked to R⁶;

or -A-R⁶ and R⁵ form together with the benzene ring M, a system of unsubstituted or substituted condensed rings;

and optical and/or geometric isomers, tautomers and salts of (I) with an acid or a base that are pharmaceutically acceptable;

and mixtures thereof.

17. (New) The method of claim 5 wherein compound (I) is selected from the group consisting of N-ethyl-N-methyl-N'-[4-(4-chloro-3-trifluoromethylphenoxy)-2,5-

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dimethylphenyl]imidoformamide and N-ethyl-N-methyl-N'-[4-(4-cyano-3-trifluoromethylphenoxy)-2,5-dimethylphenyl]imidoformamide and compound (II) is selected from the group consisting of fluconazole and itraconazole.

18. (New) The method of claim 7 wherein compound (I) is selected from the group consisting of N-ethyl-N-methyl-N'-[4-(4-chloro-3-trifluoromethylphenoxy)-2,5-dimethylphenyl]imidoformamide and N-ethyl-N-methyl-N'-[4-(4-cyano-3-trifluoromethylphenoxy)-2,5-dimethylphenyl]imidoformamide and compound (II) is selected from the group consisting of fluconazole and itraconazole.

19. (New) The method of claim 9 wherein compound (I) is selected from the group consisting of N-ethyl-N-methyl-N'-[4-(4-chloro-3-trifluoromethylphenoxy)-2,5-dimethylphenyl]imidoformamide and N-ethyl-N-methyl-N'-[4-(4-cyano-3-trifluoromethylphenoxy)-2,5-dimethylphenyl]imidoformamide and compound (II) is selected from the group consisting of fluconazole and itraconazole.